

Notwithstanding the rainy season has set in, I have collected upwards of 100 skins, besides specimens in spirits. Amongst my mammalia I may mention a specimen of Mr. Waterhouse's *Colobus satanus*, which I intend sending entire for Mr. Owen's examination; a specimen of *Antilope Ogilbyi*, Waterh.; six species of *Sciurus*, and a Flying Squirrel, which I trust will prove a new form: also an animal called by the colonists the "Ground Pig," which appears nearly allied to Mr. Waterhouse's *Cricetomys*, which I think will also prove new; a species of *Sorex* and a *Manis*, the latter of which I had alive for some days. I wish to stay here for at least twelve months should my health permit. I have requested Mr. Ogilby to describe some of my specimens which I have enumerated.

LOUIS FRASER.

P.S.—Here lie the remains of that most enthusiastic traveller Lander, without a mark or memorandum to distinguish his grave from those of his coloured neighbours. Upon this I will make no remark; having stated the fact, I shall leave it to your own reflections.

Fernando Po, Clarence, June 19, 1842.

#### BIBLIOGRAPHICAL NOTICES.

*Iconografia della Fauna Italica.* By C. L. Bonaparte, Prince of Canino. Rome, 1832-1842. London, Gould.

It is satisfactory to find that Italy, so long pre-eminent in literature and art, is at the present time displaying considerable energy in the cultivation of natural history. The museums of Turin and Florence have attained a very high degree of excellence, and respectable public collections also exist in Rome, Padua, Parma, Bologna, and other large towns. Nor do the naturalists of that country confine themselves to the formation of museums alone. Much has been done of late in Italy for the advancement of zoological and botanical science by the publication of original memoirs in the Transactions of the Academies of Turin, Florence and Bologna, as well as by the production of independent works. Unfortunately these publications are but too little known in this country, from the present very imperfect system of communication between the English and Italian booksellers.

Among the zoological works which have recently issued from the presses of Italy, there is none which has a higher claim on our attention than the 'Fauna Italica' of the Prince of Canino. For the last ten years this work has absorbed a large portion of the time and energies of its indefatigable and truly philosophic author, and as the publication is now complete, it is deserving of some notice in this journal.

The object of the present work is to illustrate the Vertebrate Animals of Italy, by giving accurate coloured plates and descriptions of all the new or imperfectly known species. Of the Reptiles of Italy it contains an entire monograph, but of the other classes of Verte-

brata it necessarily includes a selection only, though its illustrious author holds out a hope, if his life be spared, of hereafter completing the entire Fauna of Italy. In the meantime he has given in the introduction to this work an admirably lucid summary of our present state of knowledge of the Italian Vertebrata, which, if translated into the English language, would have considerable interest for British zoologists. From this essay we extract the following tabular result :

	Total of known species.	European species.	Italian species.	Figured in the present work.
Mammalia. . . . .	1260	180	90	45
Aves . . . . .	6000	540	390	35
Reptilia . . . . .	1300	92	60	60
Pisces . . . . .	7000	763	470	181

Among the animals illustrated in this work, many are new species, whose existence is now for the first time announced to the world. Some of them had indeed been known to previous naturalists, but, from the superficial methods of observation formerly in use, had been referred to analogous species of the North of Europe. It remained for the acute and discriminating eye of the Prince of Canino to detect the characters of these species, and to raise them to their true rank, and his work becomes in consequence an important contribution, not to the Italian only, but to the European Fauna.

It is indeed an interesting fact to find that Italy, separated as it is from the rest of Europe by a barrier of mountains and of seas, and enjoying a climate which excites the envy of the Teutonic race, possesses a fauna which is in a considerable degree peculiar to itself, or is shared only with its sister peninsulas of Spain and Greece. The present work will consequently possess an interest for the scholar as well as the zoologist, as tending to clear up many doubts respecting the specific identity of the animals alluded to by the poets and naturalists of ancient Italy.

In conclusion we will only add, that the plates of this work, as regards both drawing and colouring, are highly creditable to the Roman artists. The lithographic plates of birds in the earlier numbers are indeed printed rather too black, but the later ones are much improved, and are scarcely, if at all, inferior to the best ornithological works which have been produced in Britain.

*Algæ maris Mediterranei et Adriatici, observationes in diagnosin specierum et dispositionem generum.* Auctore J. G. Agardh. Paris, 1842.

By the kindness of the author we have received this important work, to which we take the earliest opportunity of calling the attention of our readers. Its interest is not merely confined to the geographical details or the elucidation of species and genera, but it contains many new and instructive systematic views, the result of the labours so successfully prosecuted by the author for some years, relative to the structure and germination of Algæ, which bid fair to take off the opprobrium long attached to all attempts at the systematic arrangement of these beautiful but puzzling productions, and which perhaps have been

instrumental in calling forth one of the first botanists of the day to their further illustration. It is a curious but happy coincidence, that two botanists, Decaisne and Agardh, deeply imbued with philosophic views, though occasionally differing on important points, should almost at the same time have published an account of the Algæ of two neighbouring seas approaching so near to each other in point of distance, though differing so much in many essential points, as the Red Sea and the Mediterranean.

The following passage from Agardh's preface gives a very interesting general view of the nature of the marine vegetation of the Mediterranean.

The vegetation of the Mediterranean compared with that of neighbouring seas presents a somewhat peculiar aspect. Species which inhabit the Red Sea scarcely occur in the Mediterranean, with the exception of certain cosmopolites which are almost universally distributed; the genera which are most characteristic of the former and most numerous in species, *Sargassum* and *Caulerpa*, are represented in the Mediterranean by very few, and those distinct species. Nor is the difference much less between the vegetation of the Mediterranean and Atlantic; the genus *Fucus*, which abounds in the Atlantic, is altogether wanting in the Mediterranean, or represented by mere floating specimens, which assume however a peculiar form in the Adriatic; many species of *Florideæ* (*Chondrus crispus* and *Ch. mamillosus*, *Rhodoménia laciniata*, *Rh. palmetta*, *Rh. ciliata*, *Delesseria sanguinea*, *D. sinuosa*, *D. alata*, &c.) of the tribes *Sphærococcoideæ* and *Delesseriæ*, which abound in more open seas, do not adorn the rocks of the Mediterranean; *Callithamnia* and *Ceramia* become scarce. On the contrary, the genera *Bryopsis*, *Valonia*, *Griffithsia* and *Poly-siphonia* are more numerous in the Mediterranean, and the vegetation of rocks exposed to the sun (embracing very many *Zoospermeæ*, *Laurenciæ*, &c., which are more generally cosmopolites) boasts of perhaps an equal number in either sea. The degree of exposure to light, and the greater or less motion of the waves, are important moments in the distribution of species.

In the larger and more tranquil and sunny bays, especially those which are shallow and sandy, *Zoospermeæ* principally occur, which are generally adorned with a brighter green in consequence of the greater intensity of the light. *Rivulariæ*, *Lyngbyæ* and many *Confervæ* flourish on the stones scattered about high-water mark; *Bryopsis myura*, *Anadyomene*, *Dasycladus* and many *Laurenciæ* grow on the larger rocks. On stones which are more submerged and consequently less exposed to light, are found *Cystoseira barbata*, *C. crinita*, *C. selaginoides*, &c., *Sargassa*, *Codium Bursa*, *Padina pavonia*, *Liagoræ*, &c.

In deep and very tranquil bays, which are less exposed to light, we may expect *Siphoneæ* and *Dictyotæ*; most of the species of *Bryopsis*, *Valonia intricata*, *Codium tomentosum*, *Asperococcus bullosus*, *Stilophoræ*, *Striaria*, *Cutleria*, *Zonariæ*, *Halyseris* and *Dictyota* adorn the stones and rocks with many species. The *Florideæ* love the open sea, choosing however rocks concealed from light and not exposed

to very strong currents: *Catenella*, *Polysiphonia obscura*, *Chondrus*, *Griffithsia* and *Gelidium ustulatum* inhabit spots almost emersed or sprinkled only with the spray; *Rhytiphleæa tinctoria*, in company with a variety of *Cystoseira abrotanifolia*, is found in ditches; *Nemalion*, many forms of *Gelidium corneum*, *Hypnæa musciformis*, *Gigartina acicularis*, &c. prefer such parts of high-water level as are exposed to waves; *Cystoseira amentacea* covers in profusion the more submerged rocks; most of the *Callithamnia*, *Griffithsia*, *Rhodomenia palmetta*, *Peyssonellia*, *Chondrus norvegicus*, and forms of *Gelidium corneum* inhabit the higher but more hidden rocks; *Phyllophora nervosa* and *Ph. Heredia*, with *Ph. coronopifolius*, adorn those which are concealed but more deeply covered. *Sphær.Lactuca* and *Chondria uvaria*, with *Va-lonia utricularis*, are often found in little hollows amongst sponges.

Agardh considers the Algæ as constituting a distinct class, which he divides into *Zoospermeæ*, *Florideæ* and *Fucoideæ*, which answer nearly to *Chlorospermei*, *Rhodospermei* and *Melanospermei* of Harvey. To these must be added *Diatomaceæ*, which however are not included in the present enumeration; nor are the Corallines and *Halimedeæ*, of which Decaisne proposes shortly to give a monograph, than which there are few greater desiderata in cryptogamic botany.

Decaisne's main divisions in his 'Plantes Arab.' published in the second volume of the 'Archives du Muséum d'Histoire Naturelle,' and in the numbers for May and June of the present year of 'Annales des Sciences Naturelles,' correspond closely with those of Agardh, though he makes one more division, *Synsporeæ*, to include *Zygnema* and its allies, which are classed by Agardh with the *Zoospermeæ*. His *Zoosporeæ*, *Aplosporeæ* and *Choristosporeæ* accord closely with Agardh's *Zoospermeæ*, *Fucoideæ* and *Florideæ*. Some genera, however, included by Agardh in his first division, as *Vaucheria*, *Codium* and *Spongodium*, are classed by Decaisne in his *Aplosporeæ*.

It is scarcely possible, without entering into the subject at great length, to give a sketch of their respective views and systems, especially as, notwithstanding the great similarity in the general result, there are many points of controversy between the authors which at present can scarcely be regarded as settled on firm grounds, and anomalies of structure unsatisfactorily explained or unnoticed\*. We must therefore content ourselves with very strongly recommending all who take an interest in Algology to study the memoirs themselves, which will afford ample matter for reflection†. *Palmelleæ* and

\* In *Sphæroplea crispa*, which is perhaps better referred to the genus *Lyngbya*, there being no other essential difference than the ultimate globular form of the concentrated masses of the green matter with which the joints are filled, a very curious phænomenon occurs. The masses, which appear to be as truly a form of fructification as the conyocysta of *Aplosporeæ*, being surrounded by their own especial hyaline coat, as is also the case in *Lyngbya speciosa* and *Lyngbya Carmichaeliana*, after a certain time break up again into Zoosperms endowed with the most lively motion. Other equally anomalous facts occur which can scarcely be at present referred with certainty to given types.

† Decaisne, who has very deeply studied the subject, has referred with great ingenuity the different forms of fructification to distinct types. He

*Ulvaceæ* are by both referred to *Zoospermeæ*; but it is to be observed, that in *Tetraspora lubrica* the four spores originate from a single globose body, precisely as in *Delesseria* and other genera with *Tetraspores*, and the quaternary arrangement in *Porphyra* appears to be of a very similar nature. We have, at least, in *Porphyra vulgaris* witnessed the division of cells into four distinct spores, each furnished with its proper envelope. *Palmella rupestris* presents also an analogous structure. We are inclined then to think, when the matter has been further studied, that they may be safely removed from their present very anomalous position. *Chaetophora*, again, if Decaisne's principles be fully carried out, must be removed to his *Aplosporeæ*, for the simple spores are as fully developed in the only species in which they have been at present observed as in any genus whatever.

One of the most useful points as regards species is the settling the true position of *Zonaria squamaria*, which is raised to the rank of a genus under the name of *Peyssonellia*, and it appears clearly to be allied to *Sphaerococcus*. The genus *Ralfsia* (= *Zonaria deusta*), which appears not to have been known either to Decaisne or Agardh, as clearly belongs to the Aplosporic group.

In conclusion we beg leave to direct attention to a very interesting work by Meneghini\* on the Algæ of Italy and Dalmatia, of which we have received the first fasciculus from the author, and we understand that another has appeared. It will consist of about ten fasciculi.

## PROCEEDINGS OF LEARNED SOCIETIES.

### ZOOLOGICAL SOCIETY.

Dec. 14, 1841.—Richard Owen, Esq., Vice-President, in the Chair.

Mr. Waterhouse laid before the Meeting his descriptions of numerous species of Coleopterous insects from the southern parts of South America, which had been placed in his hands for that purpose by H. Cuming, Esq. and C. Darwin, Esq. Those from Mr. Cuming formed part of a collection made by Mr. Thomas Bridges, who expressed a wish that the specimens should be laid before the Zoological Society. Unfortunately, the exact localities of the insects are not mentioned in Mr. Bridges's notes, but there is reason to believe

seems inclined to deny two modes of fructification altogether, and it must be confessed that his views, especially in *Choristosporeæ* (= *Florideæ*), are maintained with great ingenuity, though such generally received opinions as that of the diocious character of these Algæ cannot very easily be set aside. The typical form of fructification he considers to be the quadripartite granules, whether more or less superficial or arranged in podlike processes, and the so-called capsules he considers as mere modifications of these granules. This is one of the main points of difference between Decaisne and Agardh, and somewhat analogous points of difference exist in the other orders. His explanation of the structure of *Ulvaceæ* appears to us less clear than other points.

\* *Alge Italiane e Dalmatiche*, illustrate Dal Prof. G. Meneghini. Padova, Marzo 1842.